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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,285	07/11/2003	Johannes Schwieters	A-72356/AJT	4788
7590	05/06/2004			
Aldo J. Test DORSEY & WHITNEY LLP Suite 3400 4 Embarcadero Center San Francisco, CA 94111			EXAMINER HASHMI, ZIA R	
			ART UNIT 2881	PAPER NUMBER
DATE MAILED: 05/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/618,285	<b>Applicant(s)</b> SCHWIETERS ET AL.	
	<b>Examiner</b> Zia R. Hashmi	<b>Art Unit</b> 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/1/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under U.S.C. 103(a) as being unpatentable over Boutot et al. ( 5,689,152 ), in view of Parfitt et al. ( 6,091,068 ).

3. With respect to independent claim 1, Boutot et al. disclose a device having at least one secondary electron multiplier (SEM) ( Abstract, lines 1-3, col. 1 and lines 40-41 ), the SEM being formed in the manner of a card ( Abstract, line 2, col. 2, lines 1-4, col. 3, lines 1-3, and col. 6, lines 31-34 ), specifically substantially box-like with a small thickness in relation to its length and width ( col. 4, lines 16-20, Fig. 1, and A & C in Fig. 6 ), characterized in that the SEM is held in a frame ( 110 in Fig. 6 ).

4. With respect to claims 1-10, Boutot et al. fail to disclose a collector of ions in a mass spectrometer, which uses a SEM, or a Faraday cup. Parfitt et al., however, disclose a device for collecting ions, in particular in a mass spectrometer having one SEM and a Faraday cup ( Abstract, lines 8-19, col. 1, line 14 & 61-64, col. 2, lines 1-2, 19-22 & 27-34, col. 3, lines 25-26, col. 5, lines 30-32, col. 6, lines 31-38, 10 in Fig. 1, and 58 in Fig. 4 & 5 ) mounted on frames ( col. 5, lines 34-37, col. 6, lines 10-11, and 50 & 58 in Fig. 4 & 5 ).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the methods and apparatus of Boutot and Parfitt et al. and add features like, a printed circuit close to ion detectors, or plurality of SEMs with frames, because Parfitt et al. teach ( col. 2, lines 19-22 ) that ion detectors usually contain a combination of a Faraday collector and an electron multiplier to allow a selective operation based on advantages found in each.

### ***Conclusion***

5. Tracy et al. disclose ( 6,180,942 ) an array of charge sensitive ion detectors serving as Faraday cages instead of SEMs, all formed within a cavity in a semiconductor substrate, thereby avoiding high voltages and vacuum, not to speak of cost and complexity.


6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zia Hashmi whose telephone number is (571) 272-2473. The examiner can normally be reached between 8.30 AM- 5 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477.

Zia Hashmi

May 2, 2004.

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800